

Appl. No. 10/580,644  
Amdt. dated September 20, 2010  
Reply to Office Action of March 19, 2010

**Amendments to the Drawings:**

The attached sheet of drawings (Sheet 1 of 3) includes changes to Figure 1(a) and (b).

Attachment: Replacement Sheet

### **REMARKS/ARGUMENTS**

In the Office Action mailed March 19, 2010 (hereinafter, "Office Action"), claims 1-9 stand rejected under 35 U.S.C. § 112. Claims 1-6 and 8-9 stand rejected under 35 U.S.C. § 102(b). Claim 7 stands rejected under 35 U.S.C. § 103(a). Claims 1-7 and 9 have been amended.

Applicant expresses appreciation to the Examiner and his supervisor could for conducting an interview regarding this matter on September 15.

Applicant respectfully responds to the Office Action.

#### **I. Drawings**

A replacement sheet (Sheet 1 of 3) has been provided indicating that the embodiments shown on Figure 1 constitute "Prior Art."

Claim 7 has been rejected as not being supported by the drawings. In response to this rejection, the specification has been amended as indicated above. Support for this amendment to the specification is provided, for example, by original claim 7 and Figures 2(a) and 3(a) the pending application.

As indicated by the interview referenced above, the Examiner expressed concerns that the term "asymmetrical" in claim 7 is not shown in the drawings. In response to this concern, the term asymmetrical has been removed from claim 7. Accordingly, claim 7 now reads "wherein two or more universal beams are cut and separated into halves and the halves from different cut universal beams are used to produce the structural beam." Beams of a symmetrical structure clearly disclosed in the present application. Accordingly, Applicant respectfully submit that one skilled in the art would understand (in view of the disclosure of the present application that *asymmetrical* cellular beams may be constructed from different cut universal beams (page 4, lines 11-14)) that *symmetrical* beams may also be constructed from different cut universal beams. Applicant thus submits that support for such an embodiment is disclosed, to *one of skill in the art*, for example in original claim 7; at page 4, lines 11-14; and in Figures 2(a) and 3(a) in view of the entire disclosure of the application.

In view of the foregoing, Applicant respectfully requests withdrawal of the foregoing rejections.

**II. Claims 1-9 Rejected Under 35 U.S.C. § 112**

Claims 1-9 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 2, 3, 4, 5 and 9 have been amended to address these rejections. Accordingly, Applicant respectfully request that the rejection of claims 1-9 be withdrawn.

**III. Claims 1, 5, 8 and 9 Rejected Under 35 U.S.C. § 102(b)**

Claims 1, 5, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,990,038 to Diamond (hereinafter, “Diamond”). This rejection is respectfully traversed.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP § 2131 (citing Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Id.* (citing Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). In addition, “the reference must be enabling and describe the applicant’s claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.” *In re Paulsen*, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Further, under Section 102, Federal Circuit law has clarified that the cited reference must disclose all the elements of the pertinent claim as “arranged or combined in the same way as in” the claim at issue. (*Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008)) (“We thus hold that unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.” (Emphasis added).)

Applicant respectfully submits that the claims at issue are patentably distinct from the cited references because the cited references do not teach all of the subject matter in amended claim 1. Amended claim 1 describes a method for producing a structural beam, by “making a second cut generally longitudinally along the web of the or each initial universal beam on a second path differing from the first path of the first cut to form cut halves, wherein the first and the second cuts are spaced apart from each other thereby defining a width of material therebetween” and “welding the halves together to produce a structural beam of a desired depth, wherein the desired depth is variable at a time of manufacture by making the first and second cuts to achieve the width of the material corresponding to the desired depth.”

The inventive method defined in amended claim 1 involves production of a structural beam from at least one initial universal beam by cutting a variable width ribbon from the web of the (or each) initial universal beam. This allows the final depth of the structural beam to be selectively manipulated, allowing engineers and architects to specify exact structural beam depths for the floors of their buildings which are different from the standard depth (or depths) of the or each initial universal beam.

The methods disclosed in the cited references do not teach the depth of the structural beam to be selectively varied to suit the requirements of the engineer or architect. On the contrary, the depth of the structural beam in the prior art is set by the size of the initial universal beam used in the method. Diamond does not disclose the step of making a first cut and a second cut generally longitudinally in a universal beam “wherein the desired depth may be varied at a time of manufacture by making the first and second cuts to achieve the width of the material corresponding to the desired depth,” as recited in amended claim 1. Diamond, in contrast to the presently claimed invention, teaches the use of punching instead of cutting. (Diamond, *e.g.*, col. 2, lines 44-50.) In fact, Diamond teaches that cutting (*i.e.*, flame cutting) should not be utilized. (Diamond, *e.g.*, col. 1, lines 40-44 and 54-55; and col. 4, lines 1-7.) Further, Applicant could not identify any portion of Diamond that teaches specifying the width of the punch to achieve a structural beam of a desired depth. Applicant thus respectfully submits that the process described in Diamond does not teach the subject matter of amended claim 1.

Accordingly, Applicant respectfully submits that amended claim 1 is allowable over Diamond. Claims 5, 8 and 9 depend from claim 1, and are therefore allowable for at least the same reasons.

**IV. Claims 1, 3-5, 8 and 9 Rejected Under 35 U.S.C. § 102(b)**

Claims 1, 3-5, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,894,898 to Walker (hereinafter, "Walker"). This rejection is respectfully traversed.

Applicant respectfully submits that the claims at issue are patentably distinct from Walker because this reference does not disclose all of the subject matter in the claims.

As indicated above, amended claim 1 recites "welding the halves together to produce a structural beam of a desired depth, wherein the desired depth is variable at a time of manufacture by making the first and second cuts to achieve the width of the material corresponding to the desired depth." Applicant respectfully submits that Walker fails to disclose at least this subject matter.

Walker discloses producing a castellated beam utilizing two cuts. (Walker, Abstract.) However, Applicant could not identify any teaching of manufacturing beams of a variable depth. In contrast to the subject matter of amended claim 1, the final depth of the beam in Walker is a function of the cell diameter and pitch of the original beam and is not taught as being variable based on the cuts to the beam. Accordingly, we respectfully submit that Walker fails to teach or suggest the above identified subject matter of amended claim 1.

In view of the foregoing, Applicant respectfully submits that amended claim 1 is patentably distinct from Walker. Accordingly, Applicant respectfully request that the rejection of amended claim 1 be withdrawn because Walker does not disclose all of the subject matter of amended claim 1.

Claims 3-5, 8 and 9 depend from claim 1, and are therefore allowable for at least the same reasons. Accordingly, Applicant respectfully request that the rejection of claims 3-5, 8 and 9 be withdrawn.

**V. Claims 1, 2, 6, 8 and 9 Rejected Under 35 U.S.C. § 102(b)**

Claims 1, 2, 6, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S.

Patent No. 2,277,615 to Townsend (hereinafter, "Townsend"). As mentioned previously, an anticipation rejection requires that each limitation of a claim be disclosed by a single prior art reference. This rejection is respectfully traversed.

Applicant respectfully submits that amended claim 1 is patentably distinct from Townsend. Claim 1 has been amended to recite "making a first cut generally longitudinally along the web of the or each initial universal beam on a first path; making a second cut generally longitudinally along the web of the or each initial universal beam on a second path differing from the first path of the first cut to form cut halves." (Emphasis added.)

Townsend involves cutting a beam to form a bend within the beam. (Townsend, page 1, col. 1, line 17-24.) However, as illustrated in each of its figures, Townsend does not disclose forming "cut halves" of the beam, as recited in amended claim 1. In other words, the cuts in Townsend do not traverse the entire beam to form "cut halves." Applicant thus respectfully submits that claim 1 is allowable over the cited reference.

Claims 2, 6, 8 and 9 depend from claim 1. Accordingly, Applicant respectfully request that the rejection of claims 1 be withdrawn.

**VI. Claims 1, 2, 6, 8 and 9 Rejected Under 35 U.S.C. § 102(b)**

Claims 1, 2, 6, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,725,247 to Nilsson (hereinafter, "Nilsson"). As mentioned previously, an anticipation rejection requires that each limitation of a claim be disclosed by a single prior art reference. This rejection is respectfully traversed.

Applicant respectfully submits that the claims at issue are patentably distinct from the cited references. The cited references do not disclose all of the subject matter in the claims.

Nilsson shows a method of shaping a portion of the length of frame members 2 for vehicle frames. As disclosed in Nilsson, the frame members 2 are not cut to form "cut halves," which are separated, as specified in amended claim 1.

In view of the foregoing, Applicant respectfully submits that amended claim 1 is patentably distinct from Nilsson. Accordingly, Applicant respectfully requests that the rejection of amended

claim 1 be withdrawn because Nilsson does not disclose all of the subject matter of amended claim 1.

Claims 2, 6, 8 and 9 depend from claim 1. Accordingly, Applicant respectfully request that the rejection of claims 2, 6, 8 and 9 be withdrawn.

**VII. Claims 1, 2, 6, 8 and 9 Rejected Under 35 U.S.C. § 102(b)**

Claims 1, 2, 6, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,586,646 to Booher (hereinafter, “Booher”). As mentioned previously, an anticipation rejection requires that each limitation of a claim be disclosed by a single prior art reference. This rejection is respectfully traversed.

Applicant respectfully submits that claim 1 is patentably distinct from Booher. As indicated above, claim 1 has been amended to recite “making a first cut generally longitudinally along the web of the or each initial universal beam on a first path; making a second cut generally longitudinally along the web of the or each initial universal beam on a second path differing from the first path of the first cut to form cut halves.” (Emphasis added.) Applicant respectfully submits that this subject matter is not taught or suggested by Booher.

Booher teaches a method for “I-beam fabrication” using “two distinct T-shaped beam portions.” (Booher, Abstract.) The two distinct T-shaped beam portions are secured together using a welding carriage assembly 52. (Booher, col. 4, lines 10-16.) The two distinct T-shaped beam portions are not disclosed as being formed by cutting an I-beam. Instead, the two distinct T-shaped beam portions are merely provided without explanation. (For example, the two distinct T-shaped beam portions could be independently fabricated in a T-shape rather than being cut.) Thus, while the T-shaped beam portions are discussed at various locations within Booher (Abstract; col. 2, line 67- col. 3, line 5; col. 3, lines 12-22; col. 4, lines 10-21), Applicant could not identify any portion that teaches or suggests the above-recited subject matter of amended claim 1.

In view of the foregoing, Applicant respectfully submits that amended claim 1 is patentably distinct from Booher. Accordingly, Applicant respectfully request that the rejection of amended claim 1 be withdrawn because Booher does not disclose all of the subject matter of amended claim 1.

Claims 2, 6, 8 and 9 depend from claim 1. Accordingly, Applicant respectfully request that the rejection of claims 2, 6, 8 and 9 be withdrawn.

**VIII. Claim 7 Rejected Under 35 U.S.C. § 103(a)**

Claim 7 stands rejected under 35 U.S.C. § 103a as being unpatentable over Walker. This rejection is respectfully traversed.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 2007 U.S. LEXIS 4745, at \*\*4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). As the Board of Patent Appeals and Interferences has recently confirmed, “obviousness requires a suggestion of all limitations in a claim.” In re Wada and Murphy, Appeal 2007-3733 (citing CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003)). Moreover, the analysis in support of an obviousness rejection “should be made explicit.” KSR, 2007 U.S. LEXIS 4745, at \*\*37. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Id. (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Applicant respectfully submits that the claims at issue are patentably distinct from the cited reference. The cited reference does not teach or suggest all of the subject matter in the claims. As discussed previously above, Walker does not show all the subject matter in Claim 1. Claim 7 depends directly from claim 1. Accordingly, Applicant respectfully request that the rejection of claim 7 be withdrawn as well.



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**IX. Conclusion**

Applicant respectfully asserts that all pending claims are patentably distinct from the cited references, and request that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert S. Rapp".

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## Appendix

Replacement Sheet